

WHAT IS CLAIMED IS:

- 1 1. A method for identifying a compound that modulates angiogenesis,
2 the method comprising the steps of:
3 (i) contacting the compound with an angiogenesis polypeptide selected
4 from the group consisting of Ax1, tubulin cofactor D, transglutaminase 2, cytosine
5 deaminase, peptidase M41 (paraplegin), CD13 aminopeptidase, PRK-1, zip kinase, Gas6,
6 SRm160, non-muscle myosin heavy chain, calmodulin 2, novel symporter, novel
7 semaphorin, novel zinc finger helicase (FLJ22611), plexin-A2, deoxycytidylate
8 deaminase, and a novel sugar transporter; and
9 (ii) determining the functional effect of the compound upon the
10 angiogenesis polypeptide.
- 1 2. The method of claim 1, wherein the functional effect is determined
2 *in vitro*.
- 1 3. The method of claim 2, wherein the functional effect is a physical
2 effect.
- 1 4. The method of claim 2, wherein the functional effect is determined
2 by measuring ligand binding to the polypeptide.
- 1 5. The method of claim 2, wherein the functional effect is a chemical
2 effect.
- 1 6. The method of claim 1, wherein the polypeptide is expressed in a
2 eukaryotic host cell.
- 1 7. The method of claim 6, wherein the functional effect is a physical
2 effect.
- 1 8. The method of claim 7, wherein the functional effect is determined
2 by measuring ligand binding to the polypeptide.
- 1 9. The method of claim 1, wherein the functional effect is a chemical
2 or phenotypic effect.

- 1 10. The method of claim 10, wherein the polypeptide is expressed in a
2 eukaryotic host cell.
- 1 11. The method of claim 10, wherein the host cell is an endothelial
2 cell.
- 1 12. The method of claim 11, wherein the functional effect is
2 determined by measuring $\alpha v\beta 3$ expression or haptotaxis.
- 1 13. The method of claim 1, wherein modulation is inhibition of
2 angiogenesis.
- 1 14. The method of claim 1, wherein the polypeptide is recombinant.
- 1 15 . The method of claim 1, wherein the compound is an antibody.
- 1 16 . The method of claim 1, wherein the compound is an antisense
2 molecule.
- 1 17 . The method of claim 1, wherein the compound is an RNAi
2 molecule.
- 1 18 . The method of claim 1, wherein the compound is a small organic
2 molecule.
- 1 19 . A method for identifying a compound that modulates angiogenesis,
2 the method comprising the steps of:
3 (i) contacting the compound with an angiogenesis polypeptide selected
4 from the group consisting of Axl, tubulin cofactor D, transglutaminase 2, cytosine
5 deaminase, peptidase M41 (paraplegin), CD13 aminopeptidase, PRK-1, zip kinase, Gas6,
6 SRm160, non-muscle myosin heavy chain, calmodulin 2, novel symporter, novel
7 semaphorin, novel zinc finger helicase (FLJ22611), plexin-A2, deoxycytidylate
8 deaminase, and a novel sugar transporter;
9 (ii) determining the physical effect of the compound upon the target
10 polypeptide or fragment thereof or inactive variant thereof; and

11 (iii) determining the chemical or phenotypic effect of the compound upon
12 a cell comprising the target polypeptide or fragment thereof or inactive variant thereof,
13 thereby identifying a compound that modulates cell cycle arrest.

1 20. A method of modulating angiogenesis in a subject, the method
2 comprising the step of administering to the subject a therapeutically effective amount of a
3 compound identified using the method of claim 1.

1 21. The method of claim 20, wherein the subject is a human.

1 22. The method of claim 20, wherein the compound is an antibody.

1 23. The method of claim 20, wherein the compound is an antisense
2 molecule.

1 24. The method of claim 20, wherein the compound is an RNAi
2 molecule.

1 25. The method of claim 20, wherein the compound is a small organic
2 molecule.

26. The method of claim 20, wherein the compound inhibits
angiogenesis.

1 27. A method for identifying a compound that modulates
2 tumorigenesis, the method comprising the steps of:
3 (i) contacting the compound with an Axl polypeptide; and
4 (ii) determining the functional effect of the compound upon the Axl
5 polypeptide.

1 28. The method of claim 27, wherein the functional effect is
2 determined *in vitro*.

1 29. The method of claim 28, wherein the functional effect is a physical
2 effect.

1 30. The method of claim 28, wherein the functional effect is
2 determined by measuring ligand binding to the polypeptide.

- 1 31. The method of claim 28, wherein the functional effect is a chemical
2 effect.
- 1 32. The method of claim 27, wherein the polypeptide is expressed in a
2 eukaryotic host cell.
- 1 33. The method of claim 27, wherein the functional effect is a physical
2 effect.
- 1 34. The method of claim 33, wherein the functional effect is
2 determined by measuring ligand binding to the polypeptide.
- 1 35. The method of claim 27, wherein the functional effect is a chemical
2 or phenotypic effect.
- 1 36. The method of claim 35, wherein the polypeptide is expressed in a
2 eukaryotic host cell.
- 1 37. The method of claim 35, wherein the host cell is a cancer cell.
- 1 38. The method of claim 37, wherein the functional effect is
2 determined by measuring tumor growth *in vivo*.
- 1 39. The method of claim 27, wherein modulation is inhibition of
2 tumorigenesis.
- 1 40. The method of claim 27, wherein the polypeptide is recombinant.
- 1 41 . The method of claim 27, wherein the compound is an antibody.
- 1 42 . The method of claim 27, wherein the compound is an antisense
2 molecule.
- 1 43 . The method of claim 27, wherein the compound is an RNAi
2 molecule.
- 1 44 . The method of claim 27, wherein the compound is a small organic
2 molecule.

1 45. A method for identifying a compound that modulates
2 tumorigenesis, the method comprising the steps of:
3 (i) contacting the compound with an Axl polypeptide,
4 (ii) determining the physical effect of the compound upon the Axl
5 polypeptide or fragment thereof or inactive variant thereof; and
6 (iii) determining the chemical or phenotypic effect of the compound upon
7 a cell comprising the Axl polypeptide or fragment thereof or inactive variant thereof,
8 thereby identifying a compound that modulates tumorigenesis.

1 46. A method of modulating tumorigenesis in a subject, the method
2 comprising the step of administering to the subject a therapeutically effective amount of a
3 compound identified using the method of claim 27.

1 47. The method of claim 46, wherein the subject is a human.

1 48. The method of claim 46, wherein the compound is an antibody.

1 49. The method of claim 46, wherein the compound is an antisense
2 molecule.

1 50. The method of claim 46, wherein the compound is an RNAi
2 molecule.

1 51. The method of claim 46, wherein the compound is a small organic
2 molecule.

1 52. The method of claim 46, wherein the compound inhibits
2 tumorigenesis.